the bones of animals. But strange to say, though the blades judged by their shape, are presumed by the finder to be (like their French duplicates) of Quarternary age, the bones represent animals still living in the country.

At two other surface sites El-Ouasahai and Santon, he finds a remarkable mixture of stone implements some chipped and others polished, together with innumerable potsherds, bits of marble, glass and mosaic and flint blades of various sizes and shapes, where from an archæological point of view it would appear that he had dug into several culture periods at once, though judged by the stratification it has as yet seemed impossible to make any distinction between epochs. A final detailed report of the work will be awaited with interest.—H. C. MERCER.

PROCEEDINGS OF SCIENTIFIC SOCIETIES.

Boston Society of Natural History.—February 3, 1897.—The following paper was read: Mr. William C. Bates, "Venezuela and Guiana, their Natural History, Scenery and People."—SAMUEL HENSHAW, *Secretary.*

New York Academy of Sciences, Biological Section.—January 11, 1897.—Dr. G. S. Huntington read a paper entitled "A Contribution to the Myology of *Lemur bruneus.*"

The paper deals with some of the ventral trunk muscles and the appendicular muscles of the forelimb and pectoral girdle. A comparison of the structure of these muscles with the corresponding parts in other members of the suborder shows *L. bruneus* to possess marked primate characters in the arrangement of the pectoral girdle muscles and the muscles of the proximal segment of the anterior limb. This is especially evident in the lateral recession of the pectorales; the compound character of the ectopectoral insertion, the junctions of a pectoralis abdominalis with the typical entopectoral insertion, and the presence of an axillary muscular arch, derived from the tendons of the Latissimus dorsi and connected with the deep plane of insertion of the ectopectoral tendon.

The presence of a third or inferior portion of the coraco-brachialis is noted in addition to the upper and middle portion usually present in the Lemuroidia.

The ventral trunk muscles present a distinct carnivore type in their arrangement, instanced by the high thoracic extension of the rectus abdominalis, the occurrence of a well-developed supra costalis, the union of levator scapulæ and serratus magnus, the thoracic extension of the scalenus group—interlocking both with the serratus magnus and obliquus externus.

The aponeurosis of the obliquus externus presents a well-developed division of the internal pillar of the external abdominal ring, dovetailing with the one from the opposite side and forming the triangular ligament of the same.

Mr. H. E. Crampton, Jr., reported some of his "Observations Upon Fertilization in Gasteropods."

The observations were made upon the eggs of a species of Doris, collected last summer on the Pacific coast by Mr. Calkins, and upon a species of Bulla which deposited eggs at Woods Holl during the months of August and September. The results may best be summarized by stating that a complete confirmation was obtained of the accounts of fertilization given by Wilson and Mathews, Boveri, and Hill for sea-urchins, Meade for Chætopterus, Kostanecki and Wiejyewski for Physa, etc. The sperm nucleus is preceded by the divided centrosome; an aster, however, not being found till the union of the germ-nuclei. The first polar spindle lies at each pole a double centrosome, the second maturation spindle but one. These are of great size, however, and the one remaining in the egg finally disintegrates, the centrosome of the first cleavage spindle being derived from the sperm. The germ-nuclei do not fuse, but lie very close to one another, in contact.

Mr. N. R. Harrington gave an account of the life history of Entoconcha, a mollusc parasitic in a Holothurian. His paper was illustrated by photographs.

The following paper was read by title: N. R. Harrington and B. B. Griffin, "Notes on the Distribution, Habits and Habitat of Some Puget Sound Invertebrates."—C. L. BRISTOL, *Secretary.*

Torrey Botanical Club.—At the annual meeting of the Torrey Botanical Club, held Tuesday evening, January 12, 1897, six new active and two corresponding members were elected. Resolutions of sorrow were adopted regarding the death of Mr. Wm. H. Rudkin, one of the oldest members, the discoverer of the hybrid oak *Quercus Rudkinii.* Annnal reports were presented by the standing committees and officers. It was resolved to print a list of the desiderata of the herbarium of plants growing within 100 miles of the city. The Treasurer reported a cash

balance of $56.89 in the regular fund, and $514.14 in the Buchanan Fund.

The Recording Secretary, Dr. Rusby, reported an average attendance of 31 persons at the 15 meetings held during the year, 2 deaths, a net gain in active membership of 28, a present active membership of 219, corresponding membership 150, honorary membership 4, scientific papers presented 37, of which 22 had been published. Several hundred new species and a number of new genera had been communicated, and there had been a marked increase in the attention given to anatomical and cryptogamic subjects.

The Editor reported that Vol. 23 of the *Bulletin* had aggregated 548 pages and 34 full-page plates, and that two numbers of the Memoirs, aggregating 206 pages, had been issued. There was a cash balance from publications of $48.09 in addition to the balance already reported by the Treasurer.

The officers for 1897 were elected as follows: President, Addison Brown; Vice-Presidents, T. H. Allen, H. H. Rusby; Treasurer, Henry Ogden; Recording Secretary, Edward S. Burgess; Corresponding Secretary, John K. Small; Editor, N. L. Britton; Associate Editors, Emily L. Gregory, Arthur Hollick, Anna McVail, B. D. Halsted, Lucien M. Underwood; Curator, Helen M. Ingersoll; Librarian, William E. Wheelock.

The scientific program of the evening included papers by Mr. A. J. Grout and Dr. N. L. Britton.

In the first paper, "Notes on Some American *Brachythecia*," Mr. Grout compared the principles of classification employed by the two prominent bryologists, Schimper and Lindberg, and stated his reasons for preferring those of the latter to those of the former. He then exhibited and remarked upon four American species of *Brachythecium*, and expressed the opinion that they represent a genus distinct therefrom.

The paper will be published in full in the *Bulletin*.

Dr. Britton's paper was upon "*Linum Virginianum* and its Relatives." He illustrated the chief distinguishing characteristics of the species of *Linum* of the *Virginianum* group, and dwelt particularly upon the claims to specific rank of *L. Virginianum medium* Walter. —Edward S. Burgess, *Secretary*.

American Philosophical Society.—February 5th.—This being one of the three meetings during the year at which special subjects are considered, the Committee on Programme selected "The Genesis

and Chemical Relations of Petroleum and Natural Gas," and invited Professor S. P. Sadtler to open the subject. Professors S. F. Peckham, of Ann Harbor, Mich., C. F. Mabery, of Cleveland, O., and F. C. Phillips, of Allegheny City, Pa., presented their views from either the geological or chemical standpoint, or both. Profs. Edw. Orton and J. P. Lesley were also invited to participate in the discussion.

Biological Club of the University of Pennsylvania.—February 1st Program.—Original communication: "Account of the Boston Meeting of the Society of American Naturalists," Profs. Macfarlane, Conklin and Cope. Demonstration: "A Fossil Micro-fungus of the Coal Measures," Dr. J. M. Macfarlane. Reviews—Psychological, Dr. Lightner Witmer.—H. C. PORTER, *Secretary.*

The Ohio State Academy of Science held its winter meeting at Columbus, December 29th and 30th. The attendance and papers read show that this society is now well past the critical period of infancy. The Presidential address, by Professor Albert A. Wright, was an argument in favor of State coöperation with the U. S. Geological Survey for the production of a topographic map of Ohio. The proposal was heartily endorsed by the academy, and a committee appointed to take steps toward carrying it out.

Prof. D. S. Kellicott gave a list of ten fresh-water sponges in Ohio, with their localities; also, additions to his list of the Odonata of the State, bringing the number up to 94.

Additions to the list of Ohio phænogams, including altogether about twenty native and nearly as many introduced species, with new stations for other rare species, were given by Edo Claassen, of Cleveland; A. D. Selby, of the Agricultural Experiment Station; W. A. Kellerman, of the State University, and E. L. Moseley, of Sandusky.

"Additions to Ohio Fungi," by F. L. Stevens, gave as new to the list eight genera, eighty-five species, ten new hosts, and thirteen new localities. Fungi new to the State list were reported also by A. D. Selby and Edo Claasen.

E. L. Moseley reported a bird new to Ohio, the murre, *Uria troile*, whose occurrence on the Great Lakes has been doubted. Two were shot at Put-in-Bay, December 19th, and on the same day two near Sandusky.

Lynds Jones gave a detailed account of a grackle-roost on the college campus at Oberlin. The old males began coming to the roost at night, May 16th, while incubation was in progress; later, the females and

young. The number during July, August and September averaged 6,000. Berries and green corn formed the bulk of the diet.

Prof. Claypole read a short paper on the Potato-rot Fungus, giving considerable evidence to show that the infection of the tubers from the parasite upon the leaves is not through the stem, but by the conidia falling to the ground and penetrating the tubers at the eyes.

"A Peculiar Case of Spore Distribution," by F. L. Stevens, cites with photographic evidence the distribution of spores of *Uncinula necator* by animal agency, probably a snail.

"An Anatomical Abnormality in the Human Hand," by E. W. Claypole, mentions a skeleton in which there were two scaphoid bones on both the right and left side.

"Os acetabuli," by Lynds Jones, describes this important secondary element of the os innominatum, which has been ignored by the majority of anatomists.

Gerard Fowke gave an account of archæological work in Pike County, and Warren K. Moorehead made remarks on a State archælogical map. Among the most interesting and important papers was one by Mr. E. E. Masterman, of New London, O., giving an account of the finding of a grooved stone axe, the material of which was profoundly oxydized at a depth of 22 feet in glacial drift or in the top of the boulder clay. The circumstances were such that every opportunity of mistake was apparently eliminated, and there seems to be no possibility of escaping the conclusion that the implement is a genuine relic of human workmanship which dates back to the later part of the ice age, when streams of water from the melting glacier deposited the sheets of gravel and clay which cover the plain of New London. Full details of the "find" have been published by Prof. E. W. Claypole in the November number of the *American Geologist*, to which the reader is referred.

Mr. Masterman exhibited also several other specimens, but none from so great a depth as the axe.

A list of Ohio Crambids was given by J. S. Stine, also a paper on "Museum Pests and Their Treatment," and one on "A Few Greenhouse Insects." E. W. Claypole presented a list of butterflies found in Summit County, and a paper on a peculiar katydid. Prof. Kellicott described a dragon-fly nymph from a thermal spring in California. Prof. F. M. Webster read a long and interesting paper on "Biological Effects of Civilization on the Insect Fauna of Ohio," and another on "The Protective Value of Action, Volitional or Otherwise, in Protective Mimicry."

Rev. H. Herzer gave a paper on "*Psaronius*," exhibiting a number of large specimens from the coal measures of Ohio.

Prof. E. W. Claypole gave an account of a stalagmitic deposit in the Carboniferous Conglomerate at Cuyahoga Falls, in which were found countless bones of a small tortoise, a few bones and teeth of the beaver, and some fragments of the skeleton of a deer.

Prof. W. G. Tight read papers on "The Preglacial Big Kanawha Drainage" and "A Preglacial Channel in Fairfield County." In a paper on "Huronite," by Prof. A. A. Wright, he proposed the use of the name "huronite diabase," as a petrographical term in tracing the distribution of boulders. "New Evidence Upon the Structure of Dinichthys," by A. A. Wright, was a resume of the evidence now existing as to whether the median element of the ventral armor of this Devonian fish consisted of a single plate only, as argued by Dr. Newberry, or of two plates, an anterior median and a posterior median, such as exist in Coccosteus, its British congener. In one species of Dinichthys indisputable evidence of *two* plates exists.

A key for identifying the land mollusca of Ohio was presented by Dr. V. Sterki.

The other papers read were: "A Simple Method of Inbedding Plant Tissues in Gelatin," E. M. Wilcox and J. W. T. Duvel; "Some Preservatives for Fresh-Water Algæ," Miss L. C. Riddle; "A Mode of Preserving Specimens for Class Use," E. W. Claypole; "Some Interesting Leaf Variations" and "Note on Cornus florida," Mrs. Kellerman; "Notes on Ustilagineæ," Aug. D. Selby; "A Hybrid Impatiens," F. L. Stevens; "Two Hydmuns," E. L. Fulmer; "Additions to the List of Exogens of Cayuhoga County," Carl Krebs; "Some Adaptations in Fungi" and "Comment on a Phase of Botanical Instruction," W. A. Kellerman; "Explorations of Norse Remains on Charles River, Mass.," Gerard Fowke; "How Do Glaciers Move?" John J. Janney; "Two Rare Fishes," Roy C. Osburn.

The academy appointed a committee to endeavor to induce the legislature to amend the game laws, and passed a resolution to be forwarded to Senator Sherman, protesting against the passage of the bill proposing to prohibit vivisection in the District of Columbia.

The officers elected for 1897 are as follows: Pres., W. A. Kellerman, Columbus; 1st Vice-Pres., Dr. C. E. Slocum, Defiance; 2d Vice-Pres., J. B. Wright, Wilmington; Sec., E. L. Moseley, Sandusky; Treas., D. S. Kellicott, Columbus. Executive Committee (elective members): L. H. McFadden, Westerville; W. M. Hill, East Liverpool.—E. L. Moseley, *Secretary*, Sandusky, Ohio.

Eleventh Annual Session of the Iowa Academy of Sciences.—The Iowa Academy in its eleventh annual session at Des Moines, Dec. 29th and 30th, 1896 enjoyed one of its most profitable sessions. The papers presented were as follows.

Prof. S. Calvin, "The State Quarry Limestone," discussed a series of limestone ledges in Johnson Co., Iowa, which are of Devonian(?) age and consist of comminuted parts of brachiopods, crinoids, etc., some of them deserving to rank as a brachiopod coquina. Its unconformability on the Cedar Valley limestone shows an erosion period not hitherto suspected in the Devonian and is evidently one of long duration. The fauna of the formation included the Devonian *Ptyctodus* and the subcarboniferous *Psephodes* among the rich fish remains and also brachiopods showing affinities to the carboniferous forms.

C. R. Keyes, "Stages of the DesMoines or Chiey coal-bearing series of the Kansas and southwest Missouri and their equivalents in Iowa," also, in conjunction with R. R. Rowley (read by title), "Vertical Range of Fossils at Louisiana."

A. G. Leonard, "Natural Gas in the Drift of Iowa" enumerates localities where natural gas occurs in the state and discusses its origin. Of the coal measures shales and the vegetable remains in the drift as possible sources the author concluded that for the Iowa localities the latter is the probable one.

J. L. Tilton, "Results of Recent Geological work in Madison Co." describes the geological formations of the county and discusses particularly the relation of preglacial to present drainage system.

G. E. Finch, "A Drift Section at Oelwein" described minutely an exposure recently brought to light in a railroad cut showing three distinct till sheets.

S. G. Beyer, "Evidence of a Sub-Aftonian Drift in Northeastern Iowa." Deduces from evidence at Oelwein, Albion and other points the extension of the Sub-Aftonian to this portion of the state.

T. H. Macbride, "The Botany of a Pre-Kansan Peat-bed" described recognizable plants occurring in the drift section exposed at Oelwein.

B. Shimek, "Observations on the Surface Deposits of Iowa" gave additional observations in support of his view presented at the last annual meeting of the Academy that the loess formation of western Iowa were of aeolian origin.

The same author in "The Flora of the Sioux Quartzite in Iowa," listed the species observed on this formation and discussed their relation to the flora of the other parts of the state, "Notes on the Aquatic Plants of Northern Iowa" also by the same author was devoted mainly to the flowering species occurring in ponds and lakes.

Bruce Fink in "Spermaphyta of the Fayette Iowa Flora" presented a list of about 700 species of plants collected for that locality.

T. Z. Fitspatrick, "Notes on the Flora of Iowa," a short list of species new to the state or but little known to its flora.

G. W. Newton, "The Mechanism for securing Cross fertilization in *Salvia lanceolata.*"

L. N. Pammel, "Notes on some Introduced plants in Iowa."

Emma Sirrine, "A Study of the Leaf Anatomy of some species of the Genus *Bromus.*"

Emma Pammel, "A Comparative Study of the Leaves of *Lolium, Festuca* and *Bromus.*"

C. B. Weaver, "Anatomical Studies of the Leaves of Certain Species of the Genus *Andropogon.*"

C. R. Ball, "Some Anatomical Studies of the Leaves of *Eragrostis.*"

The four papers above, gave extended details of anatomy bearing particularly on the value of such characters as means of separating species or varieties.

Gilbert L. Houser, "The Uses of Formaldehyde in Animal Morphology." Advantages and disadvantages; uses in Neurological work, also in "The Nerve cells of the Shark's Brain" discussing morphological importance, features of structure, and details the results reached by use of the Golgi method.

L. S. Ross read three papers "Some Manitoba Cladocera with Description of One New Species." "A New Species of *Daphnia,* and Brief Notes on Other Cladocera of Iowa." "The Illinois Biological Station."

F. A. Sirrine, (by title) "The Probable life-history of *Crepidodera cucumeris.*"

Charles Carter, of Fairfield discussed the Odonata of Iowa in some preliminary remarks and requested correspondence on the group.

E. D. Ball, "Notes on the Orthopterous Fauna of Iowa."

A. H. Conrad, "The Ophidia of Iowa" remarked on the changes in the fauna of the state and the desirability of a prompt study of the group.

Herbert Osborn, "Additions to the Hemipterous Fauna of Iowa" lists of number of species not hitherto recorded.

In Business session, among other items, resolutions were passed opposing anti-vivisection laws in the District of Columbia and a subscription was voted to the Pasteur Monument Fund.

The following officers were elected for the coming year:

W. S. Franklin, President; T. H. Macbride, Vice-President; B. Fink, 2nd. Vice-President; Herbert Osborn, Secretary and Treasurer; L. S.

Ross, J. L. Tilten and C. C. Bates to serves with officers as elective members of executive committee.—HERBERT OSBORN, *Secretary.*

Botanical Seminar of the University of Nebraska.—January 16.—At the regular monthly meeting. De Alton Saunders presented a paper upon "The Relations of the Laboulbeniaceæ to the Red Seaweeds," illustrated by blackboard sketches of their structure.

January 23.—This adjourned meeting was devoted to a Symposium upon "Systematic Mycology" led by Roscoe Pound, who spoke first upon "The Relation of Morphology to Classification" and then upon "Schrœter's Arrangement considered as a Modification of the Brefeldian Arrangement." Hs was followed by Dr. Bessey on "The Natural Arrangement of the Fungi," and F. E. Clements on "Suggestions for a Re-arrangement of the Higher Fungi."

SCIENTIFIC NEWS.

A PROTEST.—I am sure that I voice the opinions of a large number of naturalists when I protest against a tendency very strong in some localities to rename things already well named. It would even appear to an outsider that these persons must think that by this introduction of new names they were greatly advancing science. To me it seems that they must be clogs to the wheels of progress. One must needs know a double or even a triple nomenclature to read their papers intelligently, and this learning of these new names is, as Col. Lyman has expressed it, "like saw-dust swallowing, neither palatable nor nutritious."

As an example of what I mean I may cite the article on "Formal" in the January number of THE AMERICAN NATURALIST. We are told there that "the term formaldehyde is a cumbersome one" and "formal" is suggested as a substitute. Shall, therefore, every cumbersome name be discarded? Do not the constituent parts of the name mean something? Is not the name of the sea-urchin of northern New England—*Strongylocentrotus droebachiensis*—cumbersome? Must we, therefore, change it?

If we must change the names of these substances, of these things, because of their sesquipedalian names, let us take some pains with the substitutes proposed. Formal for formaldehyde is unfortunate. Formaldehyde has the formula H–CHO. By the rules of chemical nomenclature the term "formal" would mean a compound like acetal, one which would have the formula H–CH–$(OE)_2$ and hence the endeavor to get rid of a cumbersone term introduces a worse confusion. It is, to quote Waterhouse Hawkins' pun, bewildering.

—A COMPARATIVE ANATOMIST.